

CLAIMS

1. A process for the preparation of a transgenic plant, which method comprises:

(i) transforming a plant cell with a chimaeric gene comprising (a) a suitable promoter and (b) a coding sequence the product of which causes modification of the amount of a metabolic intermediate in glycolysis or in a pathway for the synthesis or degradation of starch, sucrose or reducing sugar; and

(ii) regenerating a plant from the transformed cell.

A process according to Claim 1, wherein the coding sequence (b) encodes an enzyme selected from phosphofructokinase, pyruvate kinase, acid invertase, starch synthase, adenine diphosphoglucose pyrophosphorylase, sucrose synthase, 6-phosphofructokinase (pyrophosphate) or sucrose phosphate synthetase.

3. A process according to Claim 1 or 2, wherein the coding sequence (b) is from a microbial gene.
4. A process according to Claim 3, wherein the coding sequence (b) is from a bacterial gene.
5. A process according to Claim 1, wherein the gene (b) encodes for phosphofructokinase.
6. A process according to any one of the preceding claims, wherein the gene (b) encodes for two or more enzymes.
7. A process according to any one of the preceding claims, wherein the plant cell transformed in step (i) is a cell

of a monocotyledonous species selected from barley, wheat, maize and rice or a dicotyledonous species selected from cotton, lettuce, melon, pea, petunia, potato, rape, soyabean, sugar beet, sunflower, tobacco and tomato.

8. A process according to Claim 5, wherein the potato is a potato cultivar selected from Desiree, Maris Bard, Record and Russet Burbank.
9. A chimaeric gene as defined in any one of Claims 1 to 6.
10. A vector which comprises a chimaeric gene as defined in any one of Claims 1 to 6 such that the chimaeric gene is capable of being expressed in a plant cell transformed with the vector.
11. A vector according to Claim 8, which is a plasmid.
12. A plant cell which harbours a chimaeric gene as defined in any one of Claims 1 to 6 such that the chimaeric gene is capable of being expressed therein.
13. A transgenic plant which harbours in its cells a chimaeric gene as defined in any one of Claims 1 to 6 such that the chimaeric gene is capable of being expressed in the cells of the plant.
14. A plant according to Claim 13, which is a potato.
15. Seed obtained from a transgenic plant as claimed in Claim 13 or 14.
16. Tubers obtained from a potato as claimed in Claim 14.

Sh
94

Sub 12
13

add
E3
E4
E6
add #27

24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100